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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/600,312	06/20/2003	Kimiyuki Yamasaki	MAT-8160US1	7655
23122	7590	05/11/2004	EXAMINER	
RATNERPRESTIA			FUNK, STEPHEN R	
P O BOX 980			ART UNIT	PAPER NUMBER
VALLEY FORGE, PA 19482-0980			2854	

DATE MAILED: 05/11/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/600,312

Applicant(s)

YAMASAKI ET AL.

Examiner

Stephen R Funk

Art Unit

2854

Rw

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 4 and 8-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 4 and 8-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 June 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☒ Certified copies of the priority documents have been received in Application No. 09/907,188.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

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On pages 1 and 4 the status of the parent application Serial No. 09/907,188 should be updated.

The abstract of the disclosure is objected to because it makes no mention of the claimed invention. Correction is required. See MPEP § 608.01(b).

The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: The specification does not support “varying” the squeegee speed and pressure as recited in claim 10. The specification only appears to support “changing” the squeegee speed and pressure. See page 18 line 30 and page 19 line 11 in the specification, for example.

Applicant is advised that should claim 9 be found allowable, claim 10 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k). In view of the fact that the specification does not disclose or define “varying” it is presumed to have the same meaning as “changing”.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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Claims 4 and 8 are rejected under 35 U.S.C. 102(b) as being anticipated by Higashida et al. (EP 842 772). Higashida et al. teach a screen printing apparatus comprising a positioner (page 2 lines 30 - 42) for positioning a substrate (301) relative to a mask plate (300) having a pattern hole (301a), a fill-in detector (page 5 lines 52 - 56), and a print condition correction unit (31) for modifying (e.g. squeegee speed) printing on the substrate. See also page 6 lines 14 - 16 and 45 - 46 and Figures 2 and 4 of Higashida et al. The positioner, addressed by Higashida et al. with respect to prior art printing processes in Figures 13A and 13B, is inherent in any screen printing apparatus so as to print the solder on the correct position of the substrate. With respect to claim 8 the process of using the apparatus of Higashida et al. is inherent.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Higashida et al. in view of Legault et al. (US 5,882,720).

Higashida et al. do not teach changing both the speed *and* the pressure with which the squeegee is urged against the mask. Legault et al. disclose that both squeegee speed and squeegee pressure affect the filling of solder in the holes. See column 4 lines 9 - 17 and 21 - 34 of Legault et al. It would have been obvious to one of ordinary skill in the art to provide the method of Higashida et al. with the step of changing the speed and the pressure of the squeegee in view of Legault et al. teaching that both parameters affect the filling of solder in mask holes.

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With respect to claim 10 the meaning of "varying" is not deemed to differ from the meaning of "changing".

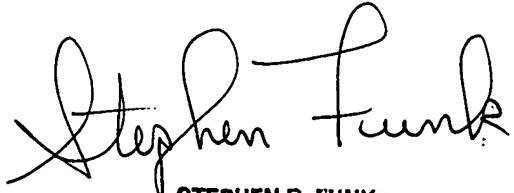
The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Note column 9 lines 25 - 45 of Hikita et al. (US 5,740,729), the via hole detecting of Akabane ('191, '193), and the Abstracts of Onishi ('233) and Matsudaira et al. ('692).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen R. Funk whose telephone number is (571) 272-2164.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Drew Hirshfeld, can be reached at (571) 272-2168.

The fax phone number for ALL official papers is (703) 872-9306. Upon consulting with the examiner *unofficial* papers only may be faxed directly to the examiner at (571) 273-2164.

SRF  
May 1, 2004



STEPHEN R. FUNK  
PRIMARY EXAMINER